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THE Bureau of Economic and Business Research of the Temple University School of Business and Public Administration was organized to provide a vehicle for stimulating and coordinating analytical studies. Its primary objectives include (1) service to the alumni as well as to the faculty and students of the University by bringing to their attention pertinent developments in the world of business, and (2) service to business and government by making contributions to the solution of specific problems. To this end, the Bureau both carries on specialized research and publishes quarterly the **Economics and Business Bulletin**, containing some of the significant results of its current studies.

The reader's appraisal of the **Bulletin** and comments upon it are solicited. The Bureau also will appreciate receiving suggestions and requests for particular studies.

The opinions and views expressed in the articles contained in this **Bulletin** are those of the writers and cannot be construed as the official opinions or policies of the School of Business.

Work Measurement in the Department of Defense — Its Background and Beginning

by SAMUEL M. WILSON*

Ed. Note: This is the first of a series of articles which will be presented on the development and use of work measurement in the Department of Defense. This article presents the history of the program's development and some of its general aspects and implications. The second will focus attention on implementation and use. Subsequent articles will present a critical review of the program and assess its future potentialities in the Department of Defense.

The author of this series as a part of his military duties performed at Headquarters, United States Marine Corps in Washington, D. C., had the experience of developing and installing a work-measurement system for the supply establishment of that service. His responsibilities in that office gave him intimate knowledge of the work program in that agency and experience in installing and operating such a system.

SINCE World War II the United States has maintained the largest "peacetime" military forces in its history. The military budget is larger than all other government budgets combined. An important part of the military budget provides for the military and civilian personnel used by the Armed Services. Furthermore, under the conditions of modern warfare, the majority of this manpower belongs to **support** rather than **combat** type organizations.

In recent years the Congress, the President, the Bureau of the Budget, and the military services have been stressing the management function. Greater attention is being focused on establishing systematic and more adequate methods for the management of manpower. Moreover, the Hoover Commission on the Organization of the Executive Branch of the Government emphasized this need in its report of February, 1949. Among other things, this commission recommended management improvement whereby the objectives of the government would be expressed in quantitative terms of programs, activities, and functions, i.e., work to be performed rather than "in mere classifications of expenditures."

THE PROBLEM OF MANPOWER MANAGEMENT

The Military Services of the Department of Defense[1] are involved in developing and implementing separate systems for measuring and evaluating the use of either part or all of their manpower on a formal basis. These developments were started in a fragmentary manner during and immediately after World War II. Since early 1950, a great deal of effort has been directed toward the expansion of measurement systems designed primarily for use in **performance budgeting** and for managing manpower at different levels of the military organization.

Manpower is a fundamental resource of our nation. In 1953, the Department of Defense was using about 3 million mili-

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The writer wishes to acknowledge the assistance of the many government employees who have been of vital aid in the development of this article. The list is too long to present here in full, but the assistance of James F. Barie and Frank Krause, of the Office of the Director, Bureau of the Budget; Major General E. C. Lynch and Ralph P. Sollett, of the Office of the Assistant Secretary of Defense (Manpower and Personnel); Lieutenant Commander Robert P. Benz and Nathan Schacter, of the Office of the Navy Management Engineer; Dr. Paul D. Gard, of the Office of the Assistant Chief of Staff, G-1 Department of the Army; Lieutenant Colonel Warren K. Watson and Major Dale R. Fleming, of the Office of the Deputy for Manpower and Organization, Department of the Air Force; William Gill, Management Consultant, Department of the Army; and Colonel A. J. Roose, Supply Department, Marine Corps; was of particular value and is gratefully acknowledged.

[1]The Departments are: 1. The Department of the Army; 2. The Department of the Air Force; and 3. The Department of the Navy, including the Marine Corps.

tary personnel[2] and approximately 1 million civilians.[3] This total of nearly 4 million military and civilian personnel in our military organizations was over seven times as many people as were employed in 1951 by the American Telephone and Telegraph Company, the largest corporation in the United States,[4] and about ten times as many people as were on the payroll of the General Motors Corporation, the nation's second largest corporation in 1951.[5]

In fiscal year 1954, the Military Services spent approximately twelve billion dollars for manpower alone.[6] It was under a similar heavy burden of manpower costs that President Truman in his letters of June 8, 1951, to the Director of the Bureau of the Budget and to the Chairman of the Civil Service Commission officially recognized the need for a sound manpower management program covering all governmental personnel. He stated that since the Federal Government was the largest single employer in the country, it should set the example in conserving manpower and that all agencies should give this problem top priority. This situation indicated the urgent problem which the military services faced in developing the requirements necessary for more scientific and systematic management of manpower.

Performance budgeting, as prescribed by the Hoover Commission in 1949, is in its early stages of development and use. The application of work measurement illustrates the problems and requirements encountered in the use of performance budgets. For example, there is a need for more than merely converting numbers of people into budget dollars for manpower. A performance budget requires an additional step in determining the number of people needed to perform a specified type of work or activity. This step involves the use of translating workloads (amounts of work) into manpower needs by using performance records and standards. The application of work measurement is a demonstration of the problems and potential advantages to be derived from the application of basic management principles and tools to public service activities.

Limitations of the Work Measurement Systems

Although the procedures of time and motion study, i.e., a type of work measurement used extensively in private industry, are being introduced to some extent in military organizations, this article is not primarily concerned with the use of this technique because the primary work measurement systems which have been developed in the military services have emphasized the use of a statistical (historical) rather than a stop-watch or time study approach in determining time standards.

The manpower required by the military organizations for combat, i.e., personnel either in training for combat, in the pipeline to or from combat areas, and those actually in combat areas, is not normally included under the work measurement systems. The manpower and staffing requirements for combat organizations are set forth and justified by Tables of Organization. These Tables of Organization are normally based on the combat mission to be performed, which is usually related to a forecast of the amount of work to be accomplished by such organizations. Therefore, the training schedules and actual operations of these organizations represent essentially their work measurement program.

The co-operation of the personnel at the operating level in an organization is essential to the success of a work-measurement program. However, this article does not explore directly the means of promoting such co-operation because its focal point is management's role in de-

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[2] "U. S. is Held Ready if War Comes," **The New York Times,** March 15, 1953, p. 74.

[3] **Congressional Record,** United States of American, 83d Congress, First Session, Vol. 99, No. 21, Washington, D. C., February 6, 1953, p. 920.

[4] McClellan Smith, "Transformation of American Corporation," **The Magazine of Wall Street,** Ticker Publishing Company, Inc., 90 Broad Street, New York, December 13, 1952, p. 281.

[5] **Loc. cit.**

[6] "A Big Cut in Spending—It'll be Hard to Make," **U. S. News and World Report,** January 23, 1953, p. 66.

veloping and using work measurement systems in the Department of Defense.

The Meaning of Work Measurement

Work measurement constitutes those techniques which are used in determining the amount of time required to produce a unit of work. A work measurement system is a formal method used in establishing relationships between the volume of work produced and the manpower required to produce that volume of work. A fully developed system of work measurement requires the determination of measureable work areas, the selection of work units, the development of methods of recording and reporting the time expended and amount of work produced, the determination of sound standards, and the provision for appropriate management decisions and action which should result from the use of work measurement data.

Some General Aspects of Work Measurement

Adequacy and Quality of Work are Important. Work measurement is used to answer the question of how much manpower is used in accomplishing the job being measured. Other indirectly related questions are: How adequate are the functions or services (work being performed), and what is the relationship between their performance and the need for them? In other words, there is not only a problem of determining how much is produced per unit of time, but also whether that which is being produced is necessary and whether proper quality is being attained.

Work Measurement as a Measure of Productivity

Although its basic purpose is to promote better use of manpower, management should avoid using work measurement, **per se**, to gauge employee efficiency or productivity. There is a gross and widespread misunderstanding concerning the definition of the term efficiency. Too often it is assumed that an increase in the efficient use of manpower is wrought by a reduction in personnel or in unit labor time or costs. The notion that efficiency or efficient management can be measured alone on the basis of minimum unit time, or reduction in unit labor costs stems in large part from the position which the self-styled efficiency experts obtained in private industry about forty years ago.[7]

Hiram Davis pointed out this important problem in measuring productivity when he stated:

> The usual measure of productivity—output per input of labor—is inadequate, however, since one input factor is used to represent all input. The change in output per man-hour may be greater than the change in output per unit of total input, for example, when power or machines have been substituted for labor. On the other hand, even though man-hour output shows no change, the input of other factors may be changing materially.[8]

The true meaning of the concept of "efficiency" is complex. It has been described as "the quality of effectiveness, competence, and capability in productivity . . . it includes the elements of quality, quantity, time and method. Clearly, an undue emphasis upon reduction in cost as the one measure of efficiency is fallacious . . . It can only be obtained by establishing a proper balance between the five elements of quality, quantity, time, method and costs."[9]

Concentrating on the Organizational Whole

Management techniques for increasing productivity have to date stressed the importance of the individual direct production worker. To solve many overall problems, management should not only extend these techniques to include indirect production workers, e.g., clerical employees; but it should concentrate far more attention on the productivity of the enterprise or organization as a whole.[10]

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[7] Elmore Peterson and E. C. Plowman, **Business Organization and Management**, Richard D. Irwin, Inc., Chicago, 1948, p. 351.

[8] **U. S. Department of Labor,** "Summary of Proceedings of the Conference on Productivity," Bulletin No. 913, October, 1946, p. 11.

[9] Peterson and Plowman, **op. cit.,** p. 351.

[10] Joseph M. Juran, "Management Techniques for Stimulating Productivity," **Industrial Productivity,** Industrial Relations Research Association, L. Reed Tripp, Editor, Association Park and University, Madison, Wis., 1951, p. 76.

Joseph M. Juran has pointed out that the application of stimuli for the individual worker, which was part of the early management techniques to increase individual productivity, "placed on the workman the burden of solving many problems in productivity."[11] The basic principles of scientifically determining the best method—a fair day's work, and the selection and training of workers, all of which were developed by Frederick W. Taylor, have undergone evolutionary changes, but have been proved basically sound. However, another principle of Taylor's which proclaimed the use of money as the major factor in giving the worker a full recompense for greater production "has been demonstrated to require fundamental modification.[12] For example, Juran said: "Underlying Taylor's system of incentives were the concepts: (1) The prime concern of the workman is money; (2) The lure of added money is a sufficient incentive to induce the workman to increase production."[13] It is agreed that a worker, no doubt, is motivated by money, especially those who live under poverty conditions; nevertheless, there seem to be things more important in life on the job than mere increments of money. This may be especially true once a reasonable standard of living has been reached. The idea of participation in achieving the organization's objective, the concept of team spirit, the feeling of esprit de corps, and the search for opportunity, social standing, and security are likely to play a major role in the individual's association with an organization.

WORK MEASUREMENT IN THE MILITARY SERVICES

The use of measurement and standards form a foundation on which almost every phase of modern civilization rests. Our monetary system, the goods we buy, industry, transportation, price levels, wages, trade, and commerce are dependent upon units of measurement and standards. Without measurement and standards, military management would grope in the dark trying to find its way through a maze of unrelated facts which pertain to unrelated problems. It would have no basis for comparison, planning or control, and no methods of forecasting requirements. Harold B. Maynard in emphasizing the need for measurement reduces this need to the following statement: "Scientific Management is measurement plus control. Before control is possible, measurement must take place."[14]

Overstaffing Problem

The practical need for a rational instrument for manpower management was clearly expressed by Senator Paul Douglas when he wrote, "there is a very considerable degree of overstaffing in most federal agencies, and this is particularly acute in some."[15] Senator Douglas proceeded to list six general reasons for the existence of overstaffing, all of which would be affected significantly by a dynamic system of work measurement.

The very fact that there was no way of scientifically reducing government personnel is indicative of the need for work measurement systems. Again, Senator Douglas emphasized this need when he said: "Some reduction in government personnel is obviously needed. The practical question was: How should the reduction be made?"[16] He believed the cuts should have been made on an individual basis so that the reduction would be heaviest where overstaffing was greatest. This course required a degree of detailed knowledge which would have been impossible to obtain under the manpower control systems existing at that time (around 1949-1950). Congress was forced to make a more or less flat reduction of ten per cent in practically all departments. Senator Douglas said: "This reduction was more of the 'meat axe' than the 'surgeon's scalpel' type of budget operation." This illustration indicates how

[11] **Ibid,** p. 77.
[12] **Ibid,** p. 82.
[13] **Loc. cit.**

[14] Executive Office of the President, **Bureau of the Budget,** "A Work Measurement System." Washington, D. C., March, 1950, p. 1.
[15] Paul H. Douglas, **Economy in The National Government,** The University of Chicago Press, Chicago, 1952, p. 74.
[16] **Ibid,** p. 77.

desperately the management of the government needed a manpower planning and control tool such as work measurement, which takes the problem of manpower utilization out of the "meat axe" approach and places it under the "surgeon's scalpel" method of management control.

Senator Douglas has pointed out specifically many other reasons for more effective control of military manpower. He wrote:

> One approaches the military budget with feeling of awe and fright. It is the most important budget which comes before the Congress in terms both of national defense and the amounts of money. . . . The defense budget itself is a formidable document. . . . There exist very real military virtues—those of courage, fidelity, and devotion. These are notable qualities. But a tender concern for the public purse has never been numbered among them. The military authorities are in fact, probably the greatest wasters of manpower and materials in the country.[17]

Probably something more tragic than the waste in manpower, per se, is the adverse effects which this waste has on the morale of the personnel. People are happier when they are busy and accomplishing work which they consider worth while. Furthermore, it is said that back of each man with a gun there are at least twenty-five men in uniform."[18] Knowing that some of these twenty-five men behind are being wasted is sure to lower the morale of the man with the gun.

REASONS FOR SLOW RESPONSE TO WORK MEASUREMENT

Complexities of the Manpower Problem. The complexities in the manpower problem of the Armed Services constitute one basic reason why work measurement has not been pursued with more vigor. In most instances these complexities increase the difficulties in applying work measurement; however, they have not necessarily precluded its use. Some of the most significant complexities of the manpower problem are discussed below.

a. Many military personnel who normally perform support type duties must also be qualified to do combat duties. This requirement means that military personnel, regardless of their occupational specialty, may have to perform multiple-type duties. Work measurement is difficult under these circumstances because part of the time of the "specialists" must be consumed in acquiring and retaining the skills required for combat operations.

b. The military services have prescribed the use of a rotation system for military personnel as a means for broadening training and experience. Rotating military personnel from one activity to another every three years could mean lower rates of performance. For example, personnel without experience in supply depot operations may be rotated overseas into supply depot activities.

Such rotation requires additional training and the performance of these inexperienced persons may bear no relation to that of civilians chosen for their knowledge of this type of work. The requirements of the military services thus include its labor turnover among military personnel which result from the rotation program. This probably affects the validity of the application of performance standards as a measure of manpower required under standardized conditions of personnel assignment.

c. Another factor which contributes to the complexities of measurement is that the primary mission of the Armed Forces involves the preparation for or becoming directly engaged in combat operations. The military concept under these conditions is that the Tables of Organization reflect the staffing requirements which must be based on the military (combat) mission to be accomplished. In these cases, the work load is represented by the training schedules or actual combat operations. Although there are areas in combat-type organizations where work measurement is being used, its application has been directed more toward non-combat activities.

d. The Armed Forces have activities located throughout the United States and other parts of the world. Differences

[17] Ibid, p. 139 ff.
[18] Ibid, p. 147.

which are generated because of widely-scattered activities create problems in measuring and especially in comparing performance. For example, differences in labor markets or in the availability of qualified civilians, and in weather conditions represent the types of problems which have to be handled when establishing performance standards in different geographical locations.

e. The introduction of engineered, i.e., time study, standards is largely limited to repetitive operations and work being done in relatively large volume, such as repair, industrial, maintenance, warehousing, and certain office activities. Since 1947, engineered standards may be used wherever applicable; however, the military services have recognized the possible cost limitations in developing such standards and have stressed the use of a statistical type of work measurement which is probably more applicable for their use.

f. Changes in the technology of military apparatus, vehicles, weapons, and administrative requirements result in changes in the number and types of personnel required. This means that manning tables, performance records, and standards based on past experience may rapidly become obsolete as a basis for determining future requirements. Thus, performance standards must be reviewed and modified to reflect changing conditions.

g. The military services are using civilians (both men and women) in varying degrees for noncombat activities. The combined use of civilian and military personnel generate differences in Tables of Organization and manning tables. It is necessary, therefore, to determine the extent to which civilian and military personnel are to be used before a truly effective system for determining manpower requirements can be established.

Absence of the Profit Motive

The absence of the profit motive is one of the major obstacles to the introduction of work measurement. The military services are seldom selling anything; therefore, there does not seem to be the same need for determining prices and costs as exists in private industry. Harlow S. Person senses this important obstruction when he states: "This is the absence of something equivalent to the profit or low-cost motive in private enterprise." [19] David E. Lilienthal warned his fellow administrators concerning this problem by stating that "this failure to recognize the important principle of modern management in public affairs may bring upon us the gravest consequences."[20]

Time Study Was Prohibited

Work measurement in the Armed Services was hampered from 1915 until 1947 because the use of time studies in the military organizations was prohibited by clauses in the appropriation acts. These restrictive clauses were generated primarily by labor interests. The discontinuance of this restrictive legislation in 1947 probably reflected a change in the philosophy of Congress on military management.[21]

ORIGIN OF WORK MEASUREMENT IN GOVERNMENT

The first formal attempts to plan and control the utilization of governmental manpower on the basis of work measurement are probably found in the management of some municipal activities in the first two decades of the twentieth century.[22] Before this time a great amount of effort and manpower had been expended in devising systems to assure honesty in governmental officials and employees in spending money, but the development of accurate managerial control tools to measure accomplishment in the expenditure of manpower has been a product of very recent years. Tradition-

[19] Harlow S. Person, "Planned Execution —The Issue of Scientific Management," **Processes of Organization and Management,** Edited by Catheryn Seckler-Hudson, Public Affairs Press, Washington, D. C., 1948, p. 151.

[20] David E. Lilienthal, **Democracy on the March,** Tennessee Valley Authority, p. 145.

[21] Harold D. Smith, **The Management of Your Government,** McGraw-Hill Book Co., Inc., New York, 1945, p. 72.

[22] Clarence E. Ridley and Herbert A. Simon, **Measuring Municipal Activities,** The International City Managers' Association, Chicago, Illinois, 1943, p. 5.

ally, many laissez-faire advocates maintained the philosophy that the expenditure for government is at best a necessary evil.[23] Such an attitude toward government would never contribute to the concept that efficiency in government is necessary.

Attempts to measure and evaluate the effectiveness of city governments included the use of twenty-five criteria by the cities of Dallas, Texas, and Milwaukee, Wisconsin.[24]

The Department of Labor and Industry of the State of Pennsylvania has been determining some of its manpower requirements (budget) on the basis of work measurement since the middle thirties. Similar measurement is being used by the City of Los Angeles, California. An outgrowth of this interest in measuring government activities was the development of scoring plans for national contests covering the three fundamental fields of fire protection, health conservation, and traffc safety—contests which are being promoted by the United States Chamber of Commerce and the National Safety Council.

DEVELOPMENTS IN THE MILITARY ORGANIZATION

For many years the President, the Congress, and the Bureau of the Budget have stressed the need for attaining greater budgetary accuracy and becoming more scientific by using a "performance type" budget which relates personnel requirements and money to the measured work loads required to accomplish certain objectives.

Before and during World War II the military services depended primarily upon manning tables which were based upon and constructed from tables of organization and tables of distribution of manpower. Experience made it possible for those in charge of manpower management to allocate and distribute personnel on a broad overall basis by using such general measuring devices as ratios, quotas, and percentages. Manpower surveys and generals' and admirals' inspections were depended upon to point out gross wastes in manpower. However, scientific management of manpower which would eliminate almost all manpower waste requires precise and continuous measurement.

Department of the Navy

In 1946, the Secretary of the Navy authorized a long-range development of work measurement.[25] A work measurement manual, promulgated from the secretarial level, stimulated interest in work measurement throughout the Navy. Work measurement was developed gradually by installing the system in several bureaus and offices prior to the Hoover Commission's report to Congress in February, 1949. The Hoover Commission recommended that the whole budgeting function of the government be strengthened and simplified by the adoption of a performance or program type budgeting procedure. The adoption of the Hoover Commission recommendation resulted in the passage of Public Law 429, Title X; the issuing of Executive Order 10072; and the promulgation of Circular Letter A-8 by the Bureau of the Budget. All of these instruments stressed the improvement of manpower management.

Based upon the experience gained since 1946 and because of the pressure exerted by Congress, the President and the Bureau of the Budget, the Navy Department, on April 4, 1950, directed that the measurement of work would be undertaken throughout the Navy and on an integrated basis.[26] Coordinating and working committees established a basic framework, the reporting instructions, and the procedures for the use of work measurement data. An example of the use of this system was vividly displayed when on November 8, 1952, the Department of Defense in a news release announced that the work measurement program being used by the Navy Depart-

[23]Loc. cit.
[24]Loc. cit.

[25]Secretary of the Navy, letter subject, "Report of the Committee on Civilian Requirements," Washington 25, D. C., September 9, 1946.
[26]Secretary of Navy, letter, Washington, D. C., April 4, 1950.

ment saved approximately $2 million at nineteen shore-based activities which were under the control of Bureau of Yards and Docks during the last quarter of fiscal year 1952.[27] This Bureau received the 1952 Navy Management Improvement Honor Award for this achievement.

The Marine Corps

Since 1950, the Marine Corps has sponsored a substantial program of development in the area of work measurement. The types of work covered by the Marine Corps' system are essentially the same as those developed in other organizations of the Navy. However, the Marine Corps specializes in formulating detailed instructions which apply under the unique characteristics of that service. Furthermore, great effort has been expended in pilot testing and fitting each system to the individual Marine Corps' installations which are involved in using work measurement. For example, a supply work measurement system was pilot tested in the depot at Camp Lejeune, North Carolina, for five months before permanent instructions were written for the promulgation at other depots. In 1954, the supply work measurement system was further refined and simplified, and instructions for using electrical accounting machines for reporting became part of the system. The Marine Corps has also placed its electrical accounting machine operations on a work measurement system which is probably one of the best in the United States.

The Marine Corps focused more attention on the operating and local levels—where it is believed the pay-off is most evident. A **Local Work Measurement Manual** has been developed at headquarters and issued for use by management personnel at the local field installations. As is the case in the other military services, work measurement in the Marine Corps is part of the overall program for management improvement.

Department of the Army

The Army Service Forces employed work measurement during World War II and by January, 1945, had developed the Army's manual M-703-5, entitled, **Control Manual, Work Measurement.** Accurate work measurement data made it possible for the Army Service Forces to shift 180.0 thousand personnel from support into combat type units in 1943. The savings in manpower at this strategic time undoubtedly contributed to the success of the European campaign.

Work measurement has never been in general use throughout the Army; however, the development in certain areas since World War II has been impressive.[28] The stimuli which gave the impetus for work measurement in the Navy were practically the same as those which made it desirable for the Army; however, until 1953, only about one-fifth of the Army installations were operating under what might be termed as a fully developed program.

The Army establishments which have made the greatest strides in the development and use of work measurement are: the Third Continental Army; the Sixth Continental Army, the Adjutant Generals' Department; the Transportation Corps; the Signal Corps; the Supply Corps; and the Quartermaster Corps.

The Army's program is being conducted under the title of "The Performance Analysis System." A working group headed by a representative for a management consulting firm submitted its recommendations for a work measurement system on May 29, 1952. An Army regulation directing the use of a more unified and fully developed performance evaluation system has been in effect since 1953.

Department of The Air Force

The real need for a formal work measurement system for the Air Force was first recognized during 1949 when the Air Force Manpower Group, a staff at the secretarial level, placed emphasis on the production of a set of manpower

[27]Department of Defense, Office of Public Information, News Release, "Work Measurement Saves Millions for Navy," Washington 25, D. C., November 8, 1952.

[28]Bureau of the Budget, **A Work Measurement System,** A Case Study, Washington, D. C., March, 1950, p. 2.

guides or basic manning standards which would enable manpower survey teams to determine the true manpower requirements of an Air Force installation. After working with the basic manning standards which were published in the Air **Force Manual 150-1,** the Directorate of Manpower and Organization was unable to derive the requirements needed for planning and controlling manpower because of two basic problems. The first was the question of the means of assuring the validity of the manning tables. The second problem was how the Air Force could possibly analyze and use the great mass of tables and data which would come to headquarters under such a system.

The Secretary of the Air Force prescribed the use of an Air Force-wide work measurement program in January, 1952.[29] Pilot tests were started immediately at Williams Air Force Base, Chandler, Arizona. Since January, 1952, work measurement systems have been installed at several other installations of the Air Force which represent several types of commands and the various types of air bases.

CONCLUSION

Military demands of the modern era call for large manpower requirements. The military services have been slow in developing and using work measurement, a management technique used widely in private industry to increase productivity and conserve manpower since the turn of the twentieth century. However, in recent years all of the services of the Department of Defense have developed work measurement systems which have met with considerable success.

[29]George Washington University, College of General Studies, "History of Work Measurement in the Air Force," Washington, D. C., 1952, p. 1.

The Philadelphia Transportation Company's New Managers – The National City Lines, Inc.

by WILLIAM J. McKENNA*

The Philadelphia Transportation Company is now under new management. The National City Lines, a transit holding company, is attempting to make the PTC an efficient and profitable system. This new management has displayed initiative and imagination. Philadelphians will watch with interest its attempts to meet the many problems of the PTC—for the alternative to National City management may well be municipal ownership.

A FEW months ago the National City Lines, Inc., assumed full management of the Philadelphia Transportation Company. Philadelphians have a vital stake in the success or failure of this new management in its attempt to meet the manifold problems that confront the PTC. They have survived the recurring crises of that company and yearn for stability in its affairs—an end to strikes, threats of strikes, and increases in fares.

This transit merry-go-round is not common to Philadelphia alone. It is epidemic in the urban transit industry—including the National City Lines Transit System. (See Table 1). Urban transportation managements have been the victims of forces over which they have little control. The number of riders has steadily decreased,[1] while costs have risen steadily. Fare increases have given only temporary relief. Every fare increase has been followed by a further shift of riders to automobiles. Population shifts, decentralization of industry, growth of suburbs, changes in marketing habits, and the rise of television all have combined to emphasize the decrease in numbers of riders. But the public still demands the best possible transit service. The combination of these circumstances confronts the Philadelphia Transportation Company with a serious dilemma—the necessity for rendering efficient, safe and extensive service at a low rate, while at the same time producing a revenue adequate to provide a fair return for the services furnished.[2]

TABLE 1
Revenue Miles Operated and Revenue Passengers Carried, National City Lines, Inc., 1937-1954.

Year	Revenue Miles Operated (millions)	Revenue Passengers Carried (millions)
1937	21.7	62.7
1938	23.0	79.3
1939	27.4	99.8
1940	31.0	121.4
1941	33.1	142.5
1942	40.5	219.0
1943	46.3	294.5
1944	50.6	344.2
1945	50.0	389.9
1946	70.3	467.7
1947	75.7	477.1
1948	77.9	459.0
1949	75.1	408.2
1950	70.5	357.0
1951	70.8	341.0
1952	66.4	309.8
1953	66.4	379.2
1954	60.1	249.2

Source: **Annual Reports** for selected years, National City Lines, Inc.

The National City Lines, Inc., sought and obtained control of the management of Philadelphia Transportation Company in April, 1955. They are the inheritors of the dilemma of the Philadelphia Transportation Company. Theirs is a difficult task, indeed.

THE NATIONAL CITY LINES, INC.

On February 5, 1936, the National City Lines, Inc., was incorporated in Delaware. In that year the Philadelphia Rapid Transit Company, the predecessor of the Philadelphia Transportation Company,

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[1]The war years, of course, resulted in a very rapid increase in transit riders, and profits increased sharply. Since the war's end the decline has continued at an accelerated rate.

[2]See: W. J. McKenna, "The Dilemma of the PTC," **Economics and Business Bulletin**, Temple University School of Business and Public Administration, Vol. 4, No. 4, June, 1952.

TABLE 2
Wholly-Owned Subsidiary Companies, Estimated Population, and Gross Revenue, National City Lines, Inc., 1954

	Estimated Population Served	Gross Revenue 1954
Alabama		
Mobile City Lines, Inc.	190,000	$1,504,719
Montgomery City Lines, Inc.	105,000	1,034,060
California		
Glendale City Lines, Inc.	121,000	285,336
Long Beach City Lines, Inc. } Long Beach Motor Bus Co. }	343,000	2,063,530
Pasadena City Lines, Inc.	154,000	821,925
Sacramento City Lines	155,000	1,329,293
San Jose City Lines, Inc.	125,000	784,373
Stockton City Lines, Inc.	113,500	513,017
Florida		
Tampa Transit Lines, Inc.	201,600	1,633,114
Illinois		
Aurora City Lines, Inc. } Aurora-Elgin Bus Line, Inc. } Elgin City Lines, Inc. }	130,000	789,200
Bloomington-Normal City Lines, Inc.	44,000	268,784
Champaign-Urbana City Lines, Inc.	64,000	261,178
Danville City Lines, Inc.	40,000	211,746
Decatur City Lines, Inc.	75,000	399,912
East St. Louis City Lines, Inc.	98,000	1,306,221
Joliet City Lines, Inc.	65,000	513,431
Quincy City Lines, Inc.	48,700	207,243
Rock Island-Moline City Lines, Inc.	104,500	438,610
Transportation Advertising Co.	—	160,065
Indiana		
Terre Haute City Lines, Inc.	84,100	294,170[1]
Iowa		
Burlington City Lines, Inc.	32,700	199,185
Cedar Rapids City Lines, Inc.	78,000	543,162
Davenport City Lines, Inc.	79,600	675,849
Sioux City Lines, Inc.	94,000	749,277
Michigan		
Jackson City Lines, Inc.	60,900	357,066
Kalamazoo City Lines, Inc.	85,000	405,439
Pontiac City Lines, Inc.	73,100	477,654
Saginaw City Lines, Inc.	105,400	409,251
Mississippi		
Jackson City Lines, Inc.	97,700	763,750
Nebraska		
Lincoln City Lines, Inc.	97,500	638,961
Ohio		
Canton City Lines, Inc.	130,000	1,036,792
Portsmouth City Lines, Inc.	41,400	254,113
Oklahoma		
Tulsa City Lines, Inc.	181,000	1,623,518
Texas		
Beaumont City Lines, Inc.	93,700	580,507
El Paso City Lines, Inc.	281,000	2,034,355
El Paso and Juarez Traction Co.	281,000	2,034,355
Wichita City Lines, Inc.	70,000	252,684
Utah		
City Lines Transit Advertising Co.	—	32,619
Salt Lake City Lines	224,500	1,839,357
Washington		
Spokane City Lines, Inc.	160,500	1,468,671
Wholly-Owned Total	**4,247,400**	**$29,162,137**

Source: National City Lines, Inc., **Annual Report, 1954,** p. 8.
[1]Includes gross revenue to August 15, 1954, inclusive.

was in the throes of receivership.[3] The transit situation was not bright in Philadelphia nor in most of the United States in 1936; nor has it improved much since that date.

Management of National City Lines, Inc.

One man stands out in the genesis of the National City Lines. He is E. Roy Fitzgerald, its first and the incumbent president. He, together with his brothers, Edward M. R. Fitzgerald and W. R. Fitzgerald, and several other associates were the impetus and organizing force behind the formation of the National City Lines and have since provided its management.[4]

Principal Business

The National City Lines, Inc., is a holding company. Its principal assets consist of securities of transit companies which own and operate motor bus and street car lines in separate transit systems. In 1937 its ventures in the transit field were relatively modest. They included 16 wholly owned[5] subsidiaries, and one transit company in which it had 95.7 per cent of control.[6] Its system included service between Chicago and Evansville, Indiana, and Chicago and Paducah, Kentucky, and 12 separate local systems.

Since 1937 the National City Lines, Inc., has secured full control of several other transit systems. At the end of 1954 it owned 41 transit systems in 14 states, serving a total population of 4.2 million with a 1954 gross revenue of $29.2 million (See Tables 2 and 3). In addition the National City Lines wholly owned the transportation advertising company of Illinois, and the City Lines Transit Company of Utah. These two advertising companies supervise and place advertising in the vehicles of the various transit systems of the parent company. This arrangement permits a vigorous and efficient advertising policy to be pursued by the National City Lines system. Philadelphians have become aware of the increased space devoted to advertising on PTC vehicles during 1955.

Controlled and Affiliated Companies

In recent years the National City Lines, Inc., has adopted the policy of securing majority or partial control of the capital stocks of other transit companies. The latter in 1954 served an estimated 4.9 million people and had a gross revenue have increased from 603 in 1937 to 1890 in 1954. The number of street cars has decreased from 48 in 1948 to 20 in 1954.

TABLE 3
Number of Wholly-Owned Companies of The National City Lines, Inc., 1954

State	Number of wholly-owned operating transit companies
Alabama	2
California	7
Florida	1
Illinois	11
Indiana	1
Iowa	4
Michigan	4
Mississippi	1
Nebraska	1
Ohio	2
Oklahoma	1
Texas	4
Utah	1
Washington	1
Total	41

Source: **Annual Report, 1954,** National City Lines, Inc.

[3]The Philadelphia Transportation Company began operation on January 1, 1940. The burden of debt service has been a serious problem to the PTC since its incorporation.

[4]The management of the National City Lines, Inc., at its formation in 1936 was as follows: E. R. Fitzgerald, president; M. D. Mills, F. G. Beansley, W. R. Fitzgerald, vice-presidents; E. M. R. Fitzgerald, vice-president and treasurer; J. M. Schramm, secretary and assistant treasurer; E. V. Anderson, comptroller; and R. V. Vandermeer, assistant secretary and assistant treasurer.

In 1954 several of the 1937 management team were directors of the National City Lines, Inc. These were: E. Roy Fitzgerald, E. V. Anderson, F. G. Beansley and E. M. R. Fitzgerald (now deceased).

[5]These 16 wholly-owned subsidiaries and the number of buses operated by each were: Rex Equipment Sales, Inc., 42; Aurora-Elgin City Lines, Inc., 43; Bloomington Normal City Lines, Inc. 7; Champaign-Urbana City Lines, Inc., 9; Danville City Lines, Inc., 20; Decatur City Lines, Inc., 16; East St. Louis City Lines, Inc., 55; Joliet City Lines, Inc., 17; Kewanee City Lines, Inc., 8; La Salle-Peru City Lines, Inc., 20; Kalamazoo City Lines, Inc., 31; City Transport Corp., 63; Pontiac City Lines, Inc., 16; Saginaw City Lines, Inc., 35; Montgomery City Line, Inc., 31; Tulsa City Lines, Inc., 98. The total number of buses operated by the above subsidiaries was 536.

[6]The Southern Limited, Inc. This company operated 16 buses in 1937. The total motor coaches of the National City System

TABLE 4

Transit Companies Partially Controlled by the National City Lines, Inc., Population Served and Gross Revenue, 1954

Transit Company	Estimated Population Served	Gross Revenues 1954
Los Angeles Transit Lines	1,900,300	$24,549,102
Key System Transit Lines	747,500	12,305,236
St. Louis Public Service Co.	1,070,000	25,081,376
Baltimore Transit Co.	1,160,000	22,465,928
Total	4,807,800	$84,401,742

Source: **Annual Report, 1954,** National City Lines, Inc.

TABLE 5

Revenue Passengers, Total Transportation Revenue, and Net Profit of Selected Subdivisions of National City Lines, Inc., Selected Years, 1947-1954

Company	Years	Revenue Passenger (millions)	Transportation Revenue (millions)	Net Profit (millions)
Key System[1] Transit Lines	1947		$15.0	$1.0 (Loss)
	1949		14.1	0.3 (Loss)
	1951		13.5	0.084
	1953		10.3	1.1 (Loss)
	1954		12.3	0.187
St. Louis Public Service Co.	1947		25.5	0.55
	1949		26.6	0.7
	1951		26.0	0.5
	1953		27.2	1.7
	1954		25.1	1.1
Baltimore Transit Co.	1947	240.5	22.8	0.7
	1949	216.4	24.3	0.038
	1951	177.4	24.1	0.3
	1953	151.4	23.6	1.3
	1954	140.5	22.3	0.9

Source: **Annual Report, 1954,** National City Lines, Inc.

[1]This data is separate from that of the Railway Equipment and Realty Corp. which controlled the Key System. This corporation also has had a sharp drop in passengers since 1947.

TABLE 6

Revenue Passengers, Total Transportation Revenue, and Net Income of Selected Subdivisions of National City Lines, Inc., Selected Years, 1947-1954

Company	Years	Revenue Passengers Railway (millions)	Trolley (millions)	Coach Buses (millions)	Total Trans. Revenue (millions)	Net Income (millions)
Los Angeles Transit Lines	1947	238.2	10.6	126.8	25.8	
	1949	136.8	29.8	111.5	24.8	0.96
	1951	90.0	20.9	81.5	25.0	0.92
	1953	76.5	17.2	72.5	25.4	1.3
	1954				24.5	1.1

Source: **Moody's Public Utilities Manual,** Various years; **Moody's Transportation Manual,** 1953, 1954.

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Los Angeles Transit Lines	1947	238.2	10.6	126.8	25.8	
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	1954				24.5	1.1

Source: **Moody's Public Utilities Manual,** Various years; **Moody's Transportation Manual,** 1953, 1954.

of approximately $84.4 million (See Table 4).[7] Each of these partially owned transit companies of the National City Lines, Inc., has experienced a decline in transit patronage and erratic revenues and profit that have characterized the transit industry in recent years (See Tables 5 and 6).

Interlocking Directorates of the National City Lines, Inc.

It has been a consistent policy of the National City Lines, Inc., to have interlocking directorates[8] with its controlled and affiliated transit companies. Some of the National City Line directors are also principal officers[9] of the transit companies controlled by and affiliated with the National City Lines. These interlocking directorates and the placement of key directors of the parent in the principal offices of the controlled and affiliated companies, it is contended, have enabled the National City Lines to pursue common management policies, and thereby to attain a higher degree of efficiency in operation.

OPERATIONS OF THE NATIONAL CITY LINES, INC.

Since its incorporation in 1936 the National City Lines, Inc., has followed a policy of adding transit companies to its system whenever possible. However, it has sought to gain majority or partial control only of transit systems which offer promise of growth and basic financial stability. In this connection, since 1940 it has acquired majority or partial control in the St. Louis Public Service Company,[10] the Key System Transit Lines,[11] the Los Angeles Transit Lines,[12] the Baltimore Transit Company,[13] and

TABLE 7

Numbers of Common Stockholders and Employees, National City Lines, Inc., Selected Years, 1937-1954

Year	Number of Stockholders	Number of Employees
1937	356	1250
1939		1790
1940	422	
1941		1625
1942	466	
1943		2438
1944	865	
1945		3297
1946	2081	
1947	2448	5008
1948	2727	
1949	3116	4638
1951		4246
1953	4265	3957
1954		3481

Source: Moody's **op. cit.,** and **Annual Report,** various years, National City Lines, Inc.

[7]At the end of 1954 the National City Lines had 50.1 per cent of the capital stock (Class A) of the St. Louis Public Service Co., 59.6 per cent of the common stock of the Los Angeles Transit Company, 66.4 per cent of the Railway Equipment and Realty Company (owner of the Key System Transit Lines) and 24.6 per cent of the voting power of the outstanding shares of the Baltimore Transit Company. (This included 4,480 shares of preferred stock and 243,094 shares of the common stock).

[8]The following National City Lines directors at the end of 1954 were also directors of one or more of the controlled and affiliated companies: E. Roy Fitzgerald, D. M. Pratt, E. V. Anderson, F. G. Beansley, C. F. Reaves, D. R. Calhoun, John L. Wilson, E. C. Houghton, and R. S. Moore.

[9]Thus, D. M. Pratt, March, 1955, was president of Baltimore Transit Co.; E. Roy Fitzgerald was chairman of the Board of the St. Louis Public Service Co., the Railway Equipment and Realty Corp., and the Los Angeles Transit Company; E. C. Houghton was chairman of the Board of the Key Transit System and president of the Railway Equipment and Realty Corp., and the Los Angeles Transit Company.

[10]For a well presented argument for public-owned transit in St. Louis see the **Philadelphia Inquirer** reprint of an educational article entitled "For a Metropolitan Transit Authority," published in the **St. Louis Post Dispatch. (Philadelphia Inquirer,** Nov. 28, 1952, p. 34). The possibility of establishing a transit authority in Philadelphia has often been discussed by community leaders.

[11]The Railway Equipment and Realty Company in 1954 controlled the Key System Transit Lines which served the metropolitan area on the east shores of the San Francisco Bay area with 40 motor-coach lines. Operating revenue for the Key System in 1954 was $12.3 million, and net income in 1954 was $182. thousand. In 1953 the Key System suffered a loss of over $1.0 million.

In October, 1954, the California Public Utility Commission issued an interim order permitting the Railway Equipment and Realty Company to transfer certain operating facilities of the Key System to Bay Area Public Service Corporation, a new subsidiary.

[12]A possibility exists that the Los Angeles Transit Co. may be sold to the city. Negotiations are being conducted with this city ownership in mind. No price has been announced. The sale of the Los Angeles Transit Company would give considerable cash to the National City Lines.

[13]In November, 1945, a petition was filed by L. F. Meyer, Jr., managing director of Negotiations are being conducted with this Maryland Public Service Commission. This petition, filed on behalf of an association of Baltimore citizens, contended that the National City Lines management of the Baltimore Transit Company was harmful to the public interest. The petition was dismissed.

TABLE 8

Total Gross Operating Income, National City Lines, Inc., 1937-1954

Year	Total Gross[1]	Operating Income Passenger (millions)	Other Operating Revenue
1937	$ 4.6	$ 4.46	$0.12
1938	4.8	4.63	0.13
1939	5.9	5.63	0.23
1940	6.8	6.67	0.16
1941	7.9	7.8	0.16
1942	11.8	11.65	0.14
1943	16.2	16.0	0.2
1944	19.1	18.7	0.4
1945	19.5	19.0	0.5
1946	27.6	27.0	0.7
1947	29.5	28.7	0.8
1948	32.1	31.3	0.8
1949	30.8	30.0	0.9
1950	28.8	27.8	1.0
1951	30.8	29.7	1.1
1952	30.9	29.7	1.2
1953	30.4	29.1	1.3
1954	29.2	27.9	1.3

Source: Moody's, **op. cit.**

[1]Because all totals are rounded column 1 will not always equal totals of columns 2 and 3.

the Philadelphia Transportation Company.

This growth of the National City Lines, Inc., has resulted in a substantial increase in the number of shares of common stock outstanding,[14] the number of stockholders, and the number of employees. (See Table 7.) The rapid growth of the National City Lines' system is reflected in its financial picture over the years. In 1937 it had a total gross revenue of $4.6 million. By 1954 this had increased to $29.2 million. (See Table 8.) The success of the financial operation of the National City Lines, Inc., is evident in the growth of its net consolidated income from approximately $350.0 thousand in 1937 to approximately $3.9 million in 1954. The healthy status of the earned surplus section of the National City Lines, Inc., balance sheet is evidenced by its growth from approximately $100.0 thousand in 1937 to approximately $15.6 million in 1954. (See Table 9.) Although it must be noted that this growth in total earned surplus is partially attributable to a conservative dividend policy, that alone cannot explain it.[15] (See Table 10.)

General Management Policies

It is a fair appraisal of the National City Lines, Inc., management to state that since its incorporation in 1937 it has been aggressive, imaginative, and progressive. The policies of this holding company have included:

[14]In 1947 there were 200 thousand shares of common stock outstanding compared with 1.4 million in 1954. The preferred and Class A stock issues have been retired. In 1946 the common stock was split two to one.

[15]In 1949 when the North American Company had to sell the Capital Transit Company of Washington, D. C., because of a provision of the Public Utility Holding Company Act of October 9, 1935, Mr. Louis Wolfson and his associates bought 46.5 per cent of the shares for $2.2 million. The dividend policy of this company has been in sharp contrast to that of National City Lines, Inc. Wolfson increased the Capital Transit dividend from 50 cents to $2.00 per share. In his first year of control dividends were $480.0 thousand, while earnings were $332.0 thousand. In 1951 the dividend was doubled to $4.00, and the stock was split four to one. In 1952 the dividends per share on the basis of original stock were $15.00. In the few years of Wolfson's control surplus has been reduced from $6.0 to $2.0 million. (See **Time**, July 18, 1955, p. 18.)

1. Acquisition of transit properties of inherent soundness;
2. Willingness to dispose of weak transit holdings;
3. Readiness to shift from high cost, obsolete trolley systems to the more efficient trackless trolleys and buses;
4. Elimination of overlapping and weak routes;
5. Refinancing the debt structure of the transit lines in its system to reduce costs;
6. A careful control of high maintenance costs;

TABLE 9

Net Consolidated Income and Total Earned Surplus, National City Lines, Inc., 1937-1954

Year	Net Consolidated Income (millions)	Total Earned Surplus
1937	$0.4	$0.1
1938	0.4	0.2
1939	0.6	0.3
1940	0.8	0.6
1941	1.0	1.1
1942	1.1	1.6
1943	1.4	2.3
1944	1.4	3.1
1945	1.6	4.3
1946	3.1	5.3
1947	2.4	5.7
1948	2.4	7.5
1949	2.6	9.0
1950	2.7	10.3
1951	2.7	11.6
1952	2.7	12.7
1953	3.3	13.9
1954	3.9	15.6

Source: **Annual Report, 1954,** National City Lines, Inc.

TABLE 10

Earnings and Dividends Per Share of Common Stock, National City Lines, Inc., 1937-1954

Year	Earnings per Share[1]	Dividends per Share[2]
1937	1.03	0.75
1938	1.01	0.50
1939	2.05	1.00
1940	2.61	1.25
1941	3.87	1.50
1942	4.07	1.50
1943	2.56	1.125
1944	2.40	1.00
1945	2.61	1.00
1946	2.11	0.25
1947	1.54	1.00
1948	1.97	0.25
1949	1.75	0.25
1950	1.90	1.00
1951	1.91	1.00
1952	1.86	1.10
1953	2.35	1.50
1954	2.76	1.60

Source: **Annual Report, 1954,** National City Lines, Inc.

[1]Present share basis.

[2]On $1 par shares. Present shares by splits are equivalent to 4 of 1937 shares.

7. The adoption of a sound machine accounting system and modern, efficient accounting records and operating forms;
8. Control of the very heavy labor costs of the transit industry by avoidance of duplication and other inefficiency costs;
9. Modernization of the transit systems;
10. Improving transit service;
11. Attempting to secure compensatory rates and to revise the rate structure in the interest of justice to the riding public and the transit companies;
12. A centralized program of purchases of equipment and supplies;
13. An aggressive program to secure added nonpassenger revenues such as advertising; and
14. A centralized insurance program.

Each of these management policies could be the subject of extended discussion, but they are presented here as a summary of what management has done in the transit industry. The National City Lines has made mistakes, but it has evidenced a readiness to profit by its mistakes and to avoid repeating them.

THE NATIONAL CITY LINES, INC., AND THE PHILADELPHIA TRANSPORTATION COMPANY

On March 1, 1955, forty-three year old Douglas M. Pratt became the president of the Philadelphia Transportation Company. Mr. Pratt had been the president of the Baltimore Transit Company, an affiliate of the National City Lines, for three years prior to coming to the PTC.

At the annual meeting of PTC stockholders on April 18, 1955, a slate of five[16] National City Lines people was elected to the PTC Board. Four of these five were directors of the National City Lines, Inc., and the fifth was president of the National-City-Lines-controlled St. Louis Public Service Company. This election marks the beginning of a new phase in the life of the PTC.

The National City Lines management of PTC is a minority management. At the time of the annual meeting of stockholders on April 18, 1955, it owned only approximately 9 per cent of the capital stock of the PTC.[17] It controls only five of the 21 directors. The City of Philadelphia elected five[18] and the remaining eleven represent the general stockholders.

Policies and Program for the PTC

National City Lines, Inc., purchased PTC capital stock and secured managerial control because it felt that the transit industry in Philadelphia could be made an efficient and profitable business. The PTC's passenger decline since 1940 has been only 2.7 per cent[19] compared with over 10 per cent for the transit industry of the United States as a whole. Another favorable factor is that the PTC pays a smaller percentage of its gross receipts as taxes than do most companies in the United States.[20]

Problems

Several major problems confront the

[16]These directors were: D. M. Pratt, E. V. Anderson, J. C. Blaine, C. F. Reaves, and W. T. Russell. They are elected for a two-year period.

[17]There were outstanding at the end of 1955 a total of 752,384 shares of preferred stock and 717,005 shares of common stock. The preferred stock has equal voting rights, share for share, with the common stock. In late July, 1955, the PTC management proposed to retire all preferred stock at the rate of 1.2 shares of common stock for each share of preferred. This will need the approval of the city as well as the PTC stockholders.

The National City Lines began purchasing PTC stock through Westheim and Company, New York Stock Brokers, in the fall of 1953. The preferred stock at that time was selling at approximately $6.00, and the common at approximately $4.00 per share. As of August 1, 1955, the preferred was selling at $16.50 and the common at $19.00 per share. Considerable buying has been going on in both the preferred and common stocks in recent weeks. Mr. Pratt has said that the National City Lines, Inc., is still buying, but that he does not know the sources of other buying. On August 1, 1955, it was estimated that the National City Lines owned between 15 and 20 per cent of the PTC stock.

[18]These five directors representing the City of Philadelphia are elected in accordance with the agreement of 1907 (as amended June 12, 1939) which provides that the mayor and four citizens shall serve as directors of the company.

[19]The 1940 passenger total of the PTC was 672 million. This total rose to 1,119 million in 1946, but has declined steadily since. In 1954, PTC passengers dropped to 665 million, somewhat below the 1940 level. This passenger drop, however, was well below the 9.4 per cent decline reported for the ten largest cities and the 10.9 per cent decline for the United States as a whole.

[20]This tax rate on gross receipts is approximately 3.3 per cent for the PTC. For the transit industry in the United States as a whole, taxes are approximately 6 per cent of total operating revenue.

TABLE 11

Number of Employees and Labor Costs as a Percentage of Gross Revenue, Philadelphia Transportation Company, 1940-1954

Year	Number of Employees	Labor Costs as a Percentage of Gross Revenue
1940	9,980	49.7%
1941	10,555	48.5%
1942	11,366	47.0%
1943	11,149	46.5%
1944	11,491	51.3%
1945	11,897	54.4%
1946	12,620	59.3%
1947	12,943	59.9%
1948	12,431	61.4%
1949	11,935	64.4%
1950	11,932	63.1%
1951	11,735	62.6%
1952	11,225	65.0%
1953	11,477	66.3%
1954	10,387	63.6%

Source: **Annual Report**, National City Lines, Inc., selected years 1940-1954.

National City Lines Management of the Philadelphia Transportation Company. These problems include the following.

(1) **Labor Cost.** In 1954 labor cost accounted for 63.6 per cent of the revenue dollar. This is somewhat higher than the 57.0 per cent for the transit industry as a whole, or in comparable cities in the United States.[21] Labor cost as a percentage of gross revenue in Philadelphia increased from 49.7 per cent in 1940 to 63.6 per cent in 1954. During the same period the number of employees increased from 9,980 to 10,387. (See Table 11.)

During 1955 the National City Management has taken steps to reduce the labor costs of the PTC. Several supervisory positions have been combined, clerical and maintenance forces have been reduced.[22] Within a year or two the number of PTC employees will probably be below the 1940 level, but it does not appear likely that labor cost as a percentage of gross revenue will decrease to the 49.7 per cent reported for 1940. Nor does it appear likely that the total labor cost savings resulting from the reduction of the work force will exceed $2.0 million in 1955.

(2) **Maintenance Costs.** The maintenance costs of the PTC are higher than for most cities. As measured by manhours per vehicle, the PTC total is 52.9 manhours per 1,000 vehicles, against 44.6 in Chicago; 36.2 in Baltimore; and 33.5 in St. Louis. The costs of materials, electric power, gasoline, and other supplies has increased steadily in recent years. The age of PTC equipment and rolling stock has been a factor in increased maintenance costs.[23] However, the replacement of trolley routes with new modern diesel buses, and the replacement of old buses and other equipment will materially reduce maintenance costs.

(3) **Debt Cost.** As a result of the reorganization of the Philadelphia Rapid Transit Company in 1940, the PTC assumed a funded debt of approximately $62.0 million.[24] At the end of 1954 the total funded debt of the PTC was $43.1

[21]Labor costs in 1954 decreased by $2.4 million, while gross revenue decreased by only $485.0 thousand. However, big cities such as Chicago and New York have as large labor costs as does the PTC.

[22]Approximately 54 supervisory employees were relieved or dismissed in the early months of 1955. Several dozen clerical workers have also been dismissed because of administrative changes, changes in fare structure, and installation of machine accounting methods. There are plans to dismiss one to two hundred maintenance employees in 1955. Total employee reduction in 1955 may exceed six hundred according to PTC Public Utility Hearing in March, 1955.

[23]The PTC has not materially increased its new equipment since 1948. The subway-elevated cars range in age from 32 to 48 years. Many of the trolleys are obsolete and costly.

[24]This debt consisted of $2.4 million in real estate mortgage and miscellaneous bonds, $20.8 million in divisional lien bonds, $2.2 million in collateral trust bonds, and $36.8 million in PTC obligations.

million—a reduction in funded debt of over $18.0 million since 1940. Although this debt retirement has reduced annual interest charges by approximately $1.2 million since 1940, the total in 1954 was still $2.3 million. The major portion of these costs relates to the $25.1 million consolidated 3 per cent to 6 per cent bonds, Series A, maturing in 2039. In 1954 interest on this issue alone was $1.5 million. A reduction of this item through one or more of refinancing plans now being considered is one of the main concerns of the new PTC management.

A substantial saving in interest payments will also be realized in 1955 as a result of the refinancing of the $10 million divisional lien bonds of the PTC, maturing May 10, 1955. These bonds paid an average of over 4 per cent. A new company, the Transportation Securities Corporation, was organized by the PTC to handle the bond purchase. This securities corporation obtained a $9.3 million one-year loan at 3¾ per cent interest from a group of Philadelphia banks. This corporation also borrowed $750.0 thousand from the PTC. The maturity of the divisional lien bonds was extended to May 10, 1956, and the issue was pledged as collateral for the $9.3 million bank loan. This one-year extension will give the new PTC management an opportunity to plan permanent financing on the most favorable terms available.

(4) Labor Relations. Considerable difficulty has been experienced by the PTC management since July, 1955. The reduction of the work force has caused one strike by Local 187, International Brotherhood of Teamsters, A F of L, and Local 234, and numerous threats of strike action by the Transportation Workers Union, CIO. It appears that PTC will be forced to make some compromise in its original plans for work force reductions.

(5) Fares. First among the objectives of D. M. Pratt is to make the PTC system pay. This does not necessarily call for fare increases. It will call for an ultimate revision of the fare system. There is considerable justification for ending the subsidy which the PTC assumes in granting public school children a 7½ cent fare. This type of fare violates the user principal. It is more properly the function of the school system to finance the transportation subsidy.

(6) Modernization. A sound program of modernization is essential if the PTC system is to pay its way. The new PTC management has taken notable strides in this direction during 1955. This modernization program includes the conversion of trolley lines to trackless trolleys or buses,[25] the replacement of old buses with new diesels, and the purchase of new, modern cars for the subway-elevated system.[26] Modernization will not only cut operation and maintenance cost, but it will attract new passengers and yield higher operating revenues.[27]

(7) Renewal of PTC-City 1907 Agreement. This agreement has governed relations between the transit company and the city since July 1, 1907 (amended June 12, 1939). Principal subjects covered by this agreement include: (a) issuance of securities; (b) new construction; (c) city representation on the board of directors; (d) city share in net income under certain circumstances; (e) certain payments to be made to a sinking fund

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[25]The PTC was given permission by the Pennsylvania Public Utility Commission in May, 1955, to convert trolley routes Nos. 57, 63, 70, and 7 to buses.

[26]This program calls for an ultimate expenditure of $45.0 million. During 1955, 433 new vehicles will be placed in operation and 500 old streetcars and buses will be retired. Approximately 700 additional new Diesel buses, and at least 325 modern lightweight high-speed cars for the subway-elevated system are projected for the modernization program. The buses will cost $15.0 million. City help is being sought for the completion of the subway-elevated program. This will cost over $28.0 million. Mr. Pratt concludes that the city should purchase at least 1,250 of these new subway-elevated cars at a total cost of $12.5 million. City help will also be sought for the financing of the other 190 subway cars which cost $17.7 million.

[27]D. M. Pratt is of the opinion that experience has shown that new, modern equipment results in a 6 per cent to 7 per cent increase in passenger revenues. Park-Ride arrangements such as on trial in St. Louis offer opportunities of passenger growth. This park-ride program provides express bus service to the city's central business district from perimeter parking lots. Such a program is being studied for Philadelphia. (See U. W. Retford, "Park-Ride in St. Louis," **Traffic Quarterly**, April, 1955, p. 229.)

(amended in 1932 to make payments direct to city); (f) yearly payments to be made to the city in lieu of paving, license fees, and other obligations to the city; (g) reservation by the city of the right to purchase the transit system on any July 1, upon six months notice.[28] Serious negotiations will soon be undertaken to bring about renewal of the 1907 agreement.[29]

(8) **Public Approach.** There is one group which includes a substantial number who hold that although the profitable operation of the Philadelphia Transportation Company is desirable, it should not be the firm's sole objective. They point out that the PTC is a public utility and that public service must dominate its operations. In this light, they hold that services should not be curtailed to the point where the public is unduly prejudiced, even though maintenance of such service may mean actual financial losses. In other words this viewpoint conceives as paramount the rendering of adequate transit service without proper regard for gains or losses. Continued losses would, however, pose the question of ultimate subsidy or municipal ownership, and this would have to be decided quickly in order that the service might be continued.

Those holding this view emphasize that in taking over this enterprise, the National City Lines must always be aware that the PTC is a public servant. As such, its management policies cannot ignore the role of the City of Philadelphia in transit affairs. They point out that the early attempts of the National City Lines management to exclude the city director from its executive committee was a major error in public relations. The City of Philadelphia is a partner in transit service, and its voice must always be considered in management policies.

There is no doubt that the PTC is confronted with very heavy labor costs and a very difficult labor problem. In its solution, however, the proponents of this public approach suggest that it will be in the best final interest of the PTC to realize that any policy of reduction of labor costs must not be too drastic and that every attempt should be made to find a new position within the PTC system for all displaced labor. This is particularly important in the case of workers with many years of service with the PTC. Such older workers, once displaced, frequently have a very difficult time in securing new employment. Moreover, even though they find new employment, the workers sustain the possible loss of pension and other rights which would have been enjoyed under their seniority with the PTC. One should also observe that a few hold an extreme of this view, that is, that taking care of its workers is a social responsibility of the PTC management. The fact that the new PTC management has already altered its labor replacement policy in this direction is a sign that it has become aware of this pressure and recognizes some validity in the point.

In the last analysis, the success of the National City Lines, Inc., management of the Philadelphia Transportation Company will be measured not by the test of profitableness of operations, but by whether it has rendered efficient and adequate transit service to the public of Philadelphia and its surrounding communities—in other words by whether it has met its responsibilities as a public servant. While one may not agree with the service philosophy and the consequent requirements noted above, one may observe that if the PTC loses the good will of the riding public, it cannot long be a profitable organization. Thus, the adherents of the public approach take the position that some recognition of the principle, consistent with good manage-

[28]This right of purchase is an assignable right and the city may sell the right to the highest bidder, or purchase the system. Such a city purchase will involve payment to the PTC of the face value and accrued interest of all bonded indebtedness, the par value of all capital stocks, and the undistributed corporate surplus. The common stock value is $10.00, and its recent market price has been $19.00; par for the preferred stock is $20.00, and its recent market price has been about $12.00.

[29]It appears that one error in public relations was made by the new PTC management when it attempted to exclude the city's lone representative from the PTC executive committee. Public relations induced the management to abandon this plan.

ment prerogotives is essential if the PTC is to succeed.

Summary and Conclusions

The problems of the Philadelphia Transportation Company are epidemic in character, although Philadelphia has suffered less than other major cities from the consequences of passenger decline and cost increases. The assumption of the management of the PTC by the National City Lines, Inc., is novel for a city the size of Philadelphia. It is a minority management, but it has the support of the majority of the PTC stockholders.

The National City Lines has had notable success in the management of many wholly-owned transit companies, and several controlled and affiliated transit companies. Its policies have been aggressive, imaginative, and progressive. Its financial and dividend policies have been conservative. It has displayed initiative in its transit policies. It has solved with fair success the very basic transit problems of labor cost, maintenance, debt refunding, modernization, and fare structure.

The National City Lines management faces a much more complex problem with the Philadelphia Transportation Company than it has had with others, but it has already taken notable strides toward solving the labor, maintenance, debt, fare structure, and modernization problems which confronted that Company. Its success or failure will go far in determining the future course of public transportation in Philadelphia.

Considerable attention is being given in the United States to the management of the PTC by the National City Lines, Inc. One thing is certain—the new management is leaving no stone unturned in its effort to make the PTC a profitable business.[30]

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[30]Various steps have been suggested from time to time for relief of the transit problem of Philadelphia. Among these are: (1) encouragement of abandonment of little-used routes; (2) encouragement of shift from trolley routes to buses; (3) a stricter limit on the use of trucks and automobiles on heavily traveled PTC routes; (4) limitation of parking on heavily traveled PTC routes; (5) long-range planning of high-speed transit facilities which will generate travel to and from the city center; (6) long-range planning to place the surface-elevated underground; (7) correction of problems of streets which permit traffic flow from multiple directions and thereby increase traffic confusion and congestion; (8) permanent mid-city parking ban and its possible extension to other areas; (9) adequate rate structure; (10) removal of politics from PTC transportation; and (11) an integrated metropolitan transit system.

For the first six months of 1955 there has been a 5.6 per cent decrease in the number of passengers. If this continues for the balance of 1955, it will mean a $5.0 million loss of revenue.

Direct Mail in Industrial Selling

by WILLARD MOORE*

The rapid growth and apparent success of direct mail techniques in industrial selling are prompting many firms in these lines to re-evaluate their sales programs. This article discusses some of the more important techniques and considerations.

IN the current period increasing reliance has been placed on direct mail for industrial selling. Because of the rapidly growing importance of the technique, as measured by volume, some discussion of this development seems warranted. "Direct mail" may be defined as any form of promotion sent by mail—letters, brochures, broadsides, circulars, booklets, folders, samples, calendars, catalogs, etc. Functionally, direct mail is a way of selling. If it is to be an effective means of selling, however, its creative aspects are most important. It must make dynamic application of all the selling techniques and tools which are essential to capturing attention, creating interest and desire, establishing conviction, and stimulating action. It cannot afford to be pedestrian in either its copy or its presentation.

William H. Whyte, Jr. says,

> Direct Mail is more than a technique with which established companies can increase sales; it is a way to create entirely new markets and hundreds of new businesses are being built through the unique advantages of the medium.[1]

It is this expansive concept of selling which will be emphasized in this article.

There are those who adopt a static concept of selling. They believe that there is only so much market available to all and that they are just going to try to get their share of it. In refutation of this saturation theory of selling, the National City Bank in its monthly letter on business and economic conditions, asserted that market saturation is a myth. It said that at the beginning of the year it was feared by many that markets for consumer durable goods and housing were saturated. With the vast number of homes, cars, appliances, and other durable goods produced and sold since the end of World War II, it was believed that consumers had been able to satisfy their most pressing needs. The article went on to say:

> Yet families showed in 1954 that they are ready and willing to buy the products they find attractive. In 1954, for the first time since the end of World War II, there was no backlog of unfilled demand left over from the depression, war, or material shortages. No scares over prices or international developments stimulated buying. Nevertheless, in the third quarter of the year consumer spending for durable goods and new homes was at a faster overall rate than at the 1953 peak.[2]

The bank held that this experience showed that in a period of sustained spending power and high liquid asset holdings such as the present, families tend to upgrade their wants rather than to become saturated.

Direct mail is playing an increasingly important part in this dynamic concept of selling. Since World War II direct mail has grown far faster than the combination of other forms of advertising such as newspaper, magazine, radio, the prodigious infant TV, and a host of lesser media.

"Preselection of their market, by using lists of likely prospects, lets them fire their sales salvos with a rifle rather than a shotgun," claim the proponents of direct mail among advertisers.[3] From $483 million in 1947 the country's outlay on direct mail had jumped 160 per cent to $1,256 million in 1953, while the other types together were rising 74 per cent from $3,757 million to $6,553 million. It must be remembered, however, that the costs of all types of advertising, including direct mail, had been rising, so these figures are not a precise measure of relative gains.

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[1]William H. Whyte, Jr., "Selling in Today's Economy," **Why Do People Buy?** McGraw-Hill Book Company, June, 1953.

[2]Herbert Koshetn, "The Merchant's Point of View," **New York Times,** Sunday, January 9, 1955.

[3]Richard B. Cole, "Mailbox Melee," **The Wall Street Journal,** October 20, 1954.

People with things to sell kept right on stuffing postmen's sacks more heavily in 1954. At last compilation, through August, 1954, spending on mailed advertising had gained 6.5 per cent over a like period in 1953. August's rise was the best of the year—up 16.6 per cent from August, 1953. Leaders of the 2,000-member Direct Mail Advertising Association predict a further rise of ten per cent over that year's record spending. The latest direct mail volume figures in from the Direct Mail Advertising Association show that in January, 1955, $111,600,961 was spent on direct mail. This is a 5.77 per cent increase over January, 1954's, $105,510,100 total—a good start toward another record-breaking year for direct mail.[4]

Industrial Selling

"Industrial selling" may be defined as industry-to-industry selling as distinguished from that of the manufacturers of consumer goods, i.e., those selling direct to the consumer.

It has been defined as "Manufacturers selling to business—for business rather than personal use."[5] It implies generally, the selling of goods of greater complexity, of greater cost, and in greater volume than the consumer goods lines such as food, clothing, and furniture. It also implies goods which will be used for industrial consumption.

The following breakdown of the "Different Types of Industrial Advertisers" may be helpful.

1. Manufacturers of primary heavy machinery or equipment or manufacturers of mechanical systems, who sell directly to other manufacturers through sales engineers, including installation and servicing;

2. Manufacturers of secondary or component supplies; that is, production which is only a part of another finished product sold either to industry or consumers, including chemical manufacturers, paper manufacturers, and the like;[6] and

3. Manufacturers of building, maintenance, or production goods, sold to other manufacturers or businesses of all kinds such as public utilities, mines, contractors, schools, industrial trade schools.[7]

There is an increasing realization and conviction concerning the efficacy of direct mail in industrial selling by top management. Its broad application and ability to supplement and complement the other promotional efforts of an industry are making its possibilities more apparent. It can no longer be regarded as the stepchild of sales promotion—a sort of mongrel media. Direct mail has arrived; it has status and is being used by many of the big name companies today.

Several examples of the results of direct mail advertising may be noted:

1. Aluminum Company of America between the first of March and the last of August, 1954, boosted the number of aluminum clad buildings on architects' planning boards from 100 to 250.

2. General Electric Company set out to push sales of an important group of electrical products 15 per cent over its figure budgeted for the June quarter, but it got a 33 per cent increase.

3. Tru-Balance Corset Company, New York, in only two and one-half months during the spring of 1954, built sales of its new Scandale girdle to a point it had expected to take three years to reach.

4. Schenley Laboratories, Inc. cut off 15 per cent of its salesmen pushing Ediol, a weight-building product, but increased its sales 7 per cent and boosted profits on the item smartly.

5. R. F. Curtis of Ross-Martin Co., Tulsa, relates that two years ago he gave up distributing through dealers

[4] "How Fast is Direct Mail Growing?" **The Reporter of Direct Mail Advertising,** March, 1955, p. 54.

[5] "What is the Industrial Field?" **The Reporter of Direct Mail Advertising,** September, 1954, p. 26.

[6] One may question including the paper manufacturers in this group. In a substantial part of the business they sell through paper merchants (the distributors) who sell to the printer (the manufacturer).

[7] "What is the Industrial Field?" **The Reporter of Direct Mail Advertising,** September, 1954.

his steel cabinets for filing oil area maps and records. Since then, his sales have jumped 35 per cent and his profits more than 50 per cent as he has sold these $500 to $1,000 items by mail to every major oil company. For example, one $1,600 mail campaign last February produced $48,000 of business in four months.

6. A specialty paint manufacturer says he started in January, 1954, to send distributors mailings pushing his products. In nine months he lifted his sales 35 per cent while cutting his per unit cost 41.3 per cent as compared with the same period in the last year.[8]

These results were all achieved by direct mail advertising, an oldster among sales devices that has been growing fast in today's rough and ready competition; and they are ample evidence of its growing stature in industrial selling.

"I've never seen so much interest in direct mail, especially by top management of big companies," says Eliot L. Wight, who adds that advertising agencies are being asked more and more to integrate direct mail with other types of advertising.

"We're using direct mail much more extensively than ever before to back up other forms of advertising," agrees Ray W. Williams, sales promotion chief of McCann-Erickson, Inc., big New York advertising agency.

Application of Direct Mail to Industrial Selling

Some of the principal applications of direct mail to the problems of industrial selling are described in the following list:

1. to invite inquiries;
2. to answer inquiries;
3. to introduce salesmen;
4. to lay the groundwork for the salesman's call;
5. to follow up on salesmen's calls;
6. to ask prospect to request a demonstration;
7. to sell exclusively by mail;
8. to answer customer complaints;
9. to sell the company as a whole;
10. to help the salesman focus special emphasis on certain products;
11. to give emphasis to certain product features, (points of difference), as dictated by the needs of the industry or claims of competition — to help the salesman close the sale;
12. to supplement other promotional media;
13. to stimulate interest in company catalogs;
14. to invite participation in exhibits, trade shows, and conventions;
15. to notify customers of personnel changes, transfers, promotions, and other news;
16. to educate the sales organization as to the value and use of all phases of the promotional program; and
17. to establish the prestige of the organization which stands behind the product and the salesman.

To illustrate the point, "giving emphasis to certain product features," the experience of the Northrup, King & Company, Minneapolis (seedsmen since 1884) may be cited. The need was to help the dealer—the feed and seed store operator —to sell Northrup, King seed products, and sell more of them than lower priced competitive items, at an equitable revenue. It was pointed out that "in order to give the dealer profit protection and a defense against the trading-down tendency of the seed business, we had to develop products others could not easily duplicate."

One example of what was done may be found in the program for alfalfa seed. Northrup, King in the past had cleaned and processed the raw product to a high degree of quality, offered it to the farmer through feed and seed dealers in its area of operation—roughly the far Western, Intermountain, and Midwestern states. The company stated that this was not enough. Others could do the same thing. Thus, the product was no better or different from that of the market generally, except for small quality features which were hard to merchandise. The necessity was to create an alfalfa seed

[8]Cole, **Op. Cit.**

[9]"Seed House Breaks with Tradition, Now Makes New Sales Record," **Sales Management**, January 15, 1955.

that was definitely different. As a result, five new features were added and Northrup, King's Pioneer 919 Brand alfalfa seed ("five ways better") consequently could be promoted as (1) Wes-Gro processed; (2) fungicide treated; (3) area blended; (4) of highest guaranteed minimum purity and germination; (5) disease resistant.

This emphasis on the point of difference is one of the most effective selling devices when the point of difference can be made to coincide with some fundamental interest which the prospect has. Direct mail lends itself admirably to the development of this selling point. In illustration of points 4 and 17, the International Business Machines Corporation recently sent out a series of six letters.

In addition to emphasizing the important points of difference in the IBM Electric Typewriter, these letters also emphasized the years of manufacturing experience and engineering research which went into the product. Thus, the prestige of the company behind the product was firmly established. Company prestige is an important selling point in that it gives the customer assurance of satisfaction.

In support of points 1 and 4, to invite inquiries and lay the groundwork for the salesman's call, the following statement by William J. Carroll, president, Rockwood Sprinkler Company, is pertinent.

> If you want to spend advertising money in a way that will get you definite tangible returns, don't neglect direct mail. Next to the data sheets, the salesman likes direct mail, and the top managements like it too, because they can see definite tangible inquiries that can be followed until a certain number of the inquiries are changed into customers. You need a good list; you will need well written and well printed literature, and the cost for each individual message is higher than publication advertising.[10]

Finally one should not overlook the industrial sales potential which lies behind a good adjustment. Every businessman from time to time has to deal with an unhappy, perhaps even irate customer. An imaginative, enlightened 'you attitude" approach to such problems can be the source of greater sales.

The following item called "A Customer Protests" describes the correspondence between a certain public service company and one of its patrons.

> Gentlemen:
>
> I have been riding buses for the past eighteen months and the service seems to be getting worse every day. I think the transportation you offer is worse than that enjoyed by the people of two thousand years ago. Yours truly,
>
> Reply from the public service company:
>
> Dear Sir:
>
> We received your letter of the first and we believe that you are somewhat confused in your history. The only transportation two thousand years ago was by foot.
>
> Reply to the public service company:
>
> Gentlemen:
>
> I am in receipt of your letter of the seventh and believe that you are the ones that are confused in your history. If you will read the **Bible**, Book of David, ninth verse, you will find that Aaron rode into town on his ass, and that, gentlemen, is something I haven't been able to do on your buses for the past six months. Yours,[11]

All selling revolves around certain arguments which are designed to persuade the prospect that it is to his advantage to acquire the proposition. These arguments must fit in with some impelling motive which the prospect has.

The Industrial Selling Problem

The application of direct mail to the industrial selling problem varies but little from that of individual-consumer selling. The same principles apply. Perhaps the most significant difference lies in the type of prospects—a smaller, more highly selective group of business administrators. For these are the men who have the authority to purchase industrial products. What motives may it be presumed will impel these men to be interested in a proposition? Offhand one might say, to make a profit, to save money, time, labor, or to improve the quality of product, or to improve a method of doing something.

[10]William J. Caroll, "Why and How My Company Uses Industrial Advertising," **Industrial Marketing**, October, 1954.

[11]Edward N. Mayer, Jr., "How to Keep Direct Mail Advertising From Going Wrong," **Industrial Marketing**, July, 1954.

However, the buying motive is not always as obvious as it may seem to be. Elmer Wheeler cites the case of men's shirts. Analysis of the motives which prompted the women to buy these shirts for their men folk naturally included style, comfort, and economy as important. But actual personal observation of women as they purchased developed the one sales feature which really clicked and clinched the sales. It was neither style, comfort, nor economy. It was buttons that can't come loose; buttons that are anchored on.

What was the motive? Was it leisure (no more sewing on of buttons)? Or some may interpret it as selfishness (no bother for me), or laziness (no more work than necessary). Whatever the name of the motive, the reason for buying was clearly proved—and that this was the sales talk that did make sales.[12]

The discovery of motives is tied in with the central selling point (the point of emphasis or point of difference), in a single sales letter or sales letter series.

For example, in a new promotional campaign for its shoes, the Endicott Johnson Shoe Corporation enlisted the services of Dr. Earnest Dichter, president of the Institute for Motivational Research, to assist in the development of a new type of shoe and in the selling of it.

The decision was made to emphasize a new style of last called the Guide Step (point of difference), developed by the University of Rochester's Gait Laboratory, to conform to the shape of feet much as moccasins do. The thirty years of research that lay behind this last was stressed. The Guide Step was described as the finest combination of scientific research and practical shoemaking ever seen.[13]

The sales arguments fit in with motives of the men, women, boy, and girl customers to have a shoe which is comfortable and which is healthful. The company research which led to exact knowledge of how the foot functions gives assurance of these qualities.

It is important to find the true impulse, which prompts interest in your product. As the motive goes, so goes the selling argument.

Change in Motivations

Dr. Ernest A. Dichter, President of the Institute for Research in Mass Motivations, Inc., cites four major shifts in our thinking:

1. The trend away from puritanism.
2. Why shouldn't I?
3. We are more mature.
4. We would be more individual.

He continues:

The Trend Away From Puritanism.

Saleswise, the lessening of puritanism has pushed forward three major sales appeals:

1. the desire for comfort;
2. the desire for luxury, to enjoy sensual pleasures that go beyond mere comfort; to enjoy new sensations; to permit secret dreams to find realization; and,
3. the desire for prestige and improved social status reflected primarily in the desire for products and services which not only connote quality and improved upgraded social position to the individual, but which the customer can now use to show others where he now stands.

Why Shouldn't I?

Our increasing willingness to give vent to our whims and desires, our realization that often there's an emotional, irrational basis for many of our actions, is change No. 2 affecting our buying motivational patterns. Recurring international and national crises have conditioned Americans to seeking and accepting pleasures now, even if by previous concepts they might have been more willing to postpone them. America is experiencing a revolution in self-indulgence.

What New Appeals Has This Put Forward?

There's far greater desire for unhad experiences and adventure. People want to live more fully and completely, to escape boredom at all costs. We have no sense of guilt about seeking a

[12]Harrie A. Bell, "Why Will People Be Interested?" **The Reporter of Direct Mail Advertising**, May, 1953.

[13]William M. Freeman, "News of the Advertising and Marketing Fields," **New York Times**, Sunday, April 17, 1955.

shorter work week, greater leisure for TV or travel, rest, or radio, hobbies and self-development. Faced with something we desire or are persuaded it would be nice to have—more and more of us respond with, "Why shouldn't I?"

We Are More Mature.

Our increased maturity has meant a greater readiness by more people to buy insurance, mutual funds, private pension plans, according to long-range rather than hit-or-miss planning. Consumers want to invest for specific, concrete objectives. Motivation—probing banks and savings institutions, for instance, have discovered that Christmas, travel, college, and countless other savings plans, offering appeals of recognizable goals do far better than those merely stressing thrift. Today many sell their services with all the aggressiveness of astute retailers.

We Would Be More Individual.

The desire for individuality and creativeness is a vital force today. Though aware of its advantages, more and more people want to get away from mass production, belt-line output. They want to express themselves and gain recognition for the things they make or do. And they look for products and services which hold out appeals of individuality and self-achievement, beyond initialed undershirts or matchbooks.

Motivation research shows that the modern American wants more than money-saving. He seeks individuality, a chance to be creative. Basic desire is for emotional security. Not satisfied with having overcome hunger, we want to be loved as well as to feel pride in achievement.[14]

This new emphasis on motives is helpful in giving an awareness of the importance of being more discriminating in the discovery of motives. While Dr. Dichter does not suggest any new motives, he does present motives from a different viewpoint as they fit into the modern environment. In the attempt to discover the real motives, it is important to think in terms of a particular group of prospects, their method of thinking, and their scheme of things. One must select as the central selling point some feature which fits in most accurately with some fundamental interest which the reader has.

[14]Ernest A. Dichter, "What Are the Real Reasons People Buy Today?" **Sales Management,** February 15, 1955.

For example, a student in one of the Sales Correspondence classes recently constructed a sales series around the promotion of a Beechcraft Model B50, Executive Aircraft for businessmen. He selected as his central selling point, **mobility of action.** Here the fundamental interest of the readers may be presumed to be time-saving so that they can take part in different activities. The opening sentence of the letter read: "None of us can turn back the clock; however, we can put our available time to better use."

However, the desire to be individual or the desire to lead are also important motives to touch upon here.

Other Important Considerations

There are other important considerations in selling industrial products by direct mail. Two important items are the layout and copy factors in direct mail work. A large percentage of direct mail goes unread because it has nothing to say: "Stop, look and listen, and read what I have to say." The prospect must be made to feel that here is a message which is tied up with his welfare. His curiosity must be aroused.

The word copy here may be regarded as synonymous with layout—the arrangement of the sales story. It has to do with the size, placement, and character of various units within an advertisement. These include such things as:

1. attention-getting devices; 2. stationery; 3. headlines; 4. subcaptions; 5. illustrations; and 6. body copy.

There are two primary objectives which good copy has:

1. It must attract readers to the advertisement; and
2. The layout must guide readers from headline to call for action without confusion or loss of interest.

It makes no difference how interesting the advertising story to be told is. It is not likely to be read unless it can be made visually attractive. **The Saturday Evening Post, Fortune Magazine,** and others are excellent examples of what can be done with copy to make it inviting.

Irvin Grahm says:

> Among the many functions of a layout, one of the most important is that of "dressing" the sales message. Just as one's clothing may stigmatize, flatter, or characterize in some fashion, so may a layout express the personality of the advertisement, or "type" it so that the prospect is given an impression of its character even before reading the message. Another analogy is that layout is to the advertisement what tone is to the voice. A layout may speak in urgent, compelling commands, or it may murmur softly, suggesting rather than pressing. In between these two extremes of course lie many variations and degrees, depending upon what the advertiser wishes to accomplish. A good layout man can make craftsmanlike use of space so that the advertisement delivers just the sort of impression desired by the advertiser.[15]

Therefore, if a direct mail piece is to achieve these objectives, it should incorporate the following qualities:

1. The advertisement should show pace and direction; that is, the direct mail story should move along progressively from point to point toward the accomplishment of its objective without allowing the reader to lose interest.
2. The elements in an advertisement must be tied together with a form of unity. (That is, there must be a definite relationship between each argument; each must be supporting to the other. All must bear directly upon the objective.)
3. The reader frequently likes to shop through an advertisement. (That is, the reader frequently likes to reflect and browse. They like to alight upon one element that looks interesting, then proceed to another and yet another.)[16]

In getting these qualities of pace and direction, visual unity and the "shopping through" idea into our direct mail copy, certain devices will be found helpful. Some of these are: 1. illustrations; 2. indentions; 3. underscoring; 4. listing; 5. panels; 6. quotations; 7. different colored inks; 8. different sizes of print; 9. marginal sketches; 10. headlines; 11. varied sizes, styles, and colors of stationery; and 12. unique enclosures.

[15]Irvin Grahm, **How To Sell Through Mail Order,** McGraw-Hill Book Co., Inc. 1949, p. 161.
[16]**Loc. cit.**

Conclusions

The varied applications of direct mail to the industrial selling problem make it an important industrial sales tool. More and more alert industrialists are envisaging its possibilities in the industrial scheme of things.

Direct mail selling like personal selling is not a static concept. It applies the most recent findings from the psychology of selling. More emphasis is being placed upon the discovery of the real buying motives. Whereas there is a tendency to base selling appeals to industrialists upon relatively few motives such as profit, economy, better quality, time saving, and labor saving, motivational research now points to many other motives.

> Motivation research experts analyzing purchasing agents and other industrial buyers have concluded that where purchasing decisions are concerned these men do, in fact, act very much like icebergs. They expose and make visible about one-tenth of their real reasons for buying; and consciously or unconsciously submerge about nine-tenths of them.
>
> Buyers, whether they are window-shopping housewives or business executives, are subject to the same emotional motivations.
>
> Through motivation research the advertisers will at least be able to peek under the veil of mystery that has long shrouded the industrial man's reasons for buying. It will be possible for the alert company to develop new appeals, reslant it sales approaches, and profit from a new psychological insight.[17]

It is also important to remember in directing selling appeals that the man who uses the product in the shop may play as important a part in the purchasing decision as the purchasing agent. One must be aware of his interests as they relate to the products to be held.

S. A. White, president of Acetogen Gas Company of Detroit, a growing small business that is working against the entrenched market position of acetylene in the metal-cutting field, emphasizes the importance of selling everyone along the line. He is convinced of the necessity for pin-pointing the sales appeal to the prim-

[17]"If You Sell to the Industrial Market Get 'Em to Test It . . . and It's Nine-Tenths Sold," **Sales Management,** July 15, 1953.

ary job functions, the primary range of authority, and the primary selfish personal interest of each individual who exerts buying influence.

To emphasize the importance of selling the man on the job, White tells of their experience in sales demonstrations. He indicates that at the time a demonstration is being set up there is an opportunity to tell an entirely different kind of benefits story, this time to the metal cutter himself. He is told that there are certain advantages of Acetogen which are personally important to him—advantages he does not enjoy with acetylene. This, claims White, arouses his curiosity and deepens his interest. The salesman points out that the Acetogen flame does not hurt his eyes whereas the acetylene flame is incandescent. While the worker habitually wears dark glasses, there are times during the day when he is without them. And medical authorities agree that frequent exposure to an incandescent flame is damaging to eyesight.

The second point stressed to the operator is that acetogen will not backfire, that there is, therefore, less chance of injury. Thus, the man on the job is acquainted with the features which will benefit him.[18]

The application of direct mail to industrial selling differs but little from its application in direct consumer lines. The same human emotions are present. One must make imaginative use of all the attention-getting devices, beginning with the envelope. The proposition must be described in a manner which will show how it will benefit all those who have any connection with it. The most convincing sales arguments must be selected, as for example, demonstrations with facts and figures, pointing out advantages, other satisfied users, testimonials, and the like. The letter objective must be clearly recognized and must be clear in what it asks the prospect to do. Finally, the copy must have pace, direction, and visual unity.

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[18] "Can Motivation Research be Applied in the Field of Industrial Selling," **Sales Management**, May 20, 1955.

Philadelphia Business Index

The September 1950 issue of the Bulletin presented a new index of general businss conditions in the City of Philadelphia. This series, prepared and since maintained by Robert T. Kline, was designed to reflect economic activity exclusively within the boundaries of the city of Philadelphia. It was originally based upon a combination of statistical data representing (1) industrial electric power sales; (2) indexes of employment and employee-hours; (3) department store sales[1]; (4) bank debits[2]; and (5) total construction. Because the method of reporting certain data is under revision by the originating agencies, the change in average weekly hours worked and the monthly change in total employment in the Philadelphia metropolitan area, both prepared by the Department of Research of the Federal Reserve Bank of Philadelphia, have been substituted for (2) above. This is a temporary expedient to maintain continuity of the index. The original data series will be restored after revision.

The following table presents the index for the years 1939 through 1954 and by month from August, 1954.[3]

Index of General Business Conditions, City of Philadelphia, 1947=100

Year	Index	Month	Index
1939	73	1954	
1940	77	Aug.	118.0
1941	96	Sept.	119.0
1942	99	Oct.	117.8
1943	106	Nov.	117.0
1944	106	Dec.	117.4
1945	98	1955	
1946	100	Jan.	117.8
1947	100	Feb.	118.0
1948	103	Mar.	118.2
1949	97	April	120.0
1950	108	May	124.8
1951	111	June	123.1
1952	111	July	127.2p
1953	119	Aug.	127.5e
1954	119		

p=preliminary
e=estimated. Based on current published weekly indications.

[1]The revised index of Department Store Sales, published by the Federal Reserve Bank of Philadelphia, has been used in the composite index since October, 1951.

[2]The revised Wholesale Price Index, all commodities, published by the BLS, is used beginning January, 1952 as a deflationary index for the Bank Debit Series.

[3]Kline, Robert T., "A Measurement of General Business Conditions in the City of Philadelphia." **Economics and Business Bulletin,** Temple University School of Business and Public Administration, Philadelphia, Pa., September, 1950, pp. 33-40.